

## WHAT IS CLAIMED IS:

1. A system for at least one of skin tanning and phototherapy, comprising:  
a chamber adapted for at least one of skin tanning and phototherapy;  
and  
a nanostructure UV light emitting device.
2. The system of claim 1, wherein the system is adapted for skin tanning.
3. The system of claim 1, wherein the system is adapted for phototherapy.
4. The system of claim 1, wherein the system is adapted for both skin tanning and phototherapy.
5. The system of claim 1, wherein the chamber comprises a bed.
6. The system of claim 1, wherein the chamber comprises a booth.
7. The system of claim 1, wherein the nanostructure UV light emitting device comprises at least one of a nanoparticle and a nanowire UVA light emitting device.
8. The system of claim 7, further comprising a UV excitation source which is positioned to provide UV excitation radiation of a first peak wavelength onto the nanostructure UV light emitting device to cause the nanostructure UV light emitting device to emit UVA light having a second UVA peak wavelength longer than the first peak wavelength.
9. The system of claim 8, wherein the UV light emitting device comprises nanoparticles having an average diameter smaller than 100 nm.

10. The system of claim 8, wherein the UV light emitting device comprises nanowires having an average thickness smaller than 150 nm.
11. The system of claim 8, wherein the UV light emitting device comprises a UVA-1 light emitting device.
12. The system of claim 8, wherein the UV light emitting device comprises:
  - a first layer of first nanoparticles or nanowires located proximal to the UV excitation source, wherein the first nanoparticles or nanowires emit UV light of a third peak wavelength longer than the first peak wavelength when irradiated with the UV excitation radiation; and
  - a second layer of second nanoparticles or nanowires located distal from the UV excitation source, such that the first layer is located between the second layer and the UV excitation source, wherein the second nanoparticles or nanowires emit UV light of the second peak wavelength longer than the third peak wavelength when irradiated with the UV light from the nanoparticles or nanowires of the first layer.
13. The system of claim 8, wherein:
  - the UV excitation source comprises a gas vessel comprising a gas which is adapted to emits the UV excitation radiation in response to a stimulus; and
  - the UV light emitting device comprises at least one layer of nanoparticles coated on an inner surface of at least one UV light transparent wall of the gas vessel.
14. The system of claim 8, wherein the nanoparticles emit only UVA radiation due to their size.
15. The system of claim 8, wherein:

the UV excitation source comprises a UV lamp; and  
the UV light emitting device comprises at least one layer of nanoparticles coated on an outer surface of the UV lamp.

16. The system of claim 8, further comprising a filter located between the UV excitation source and the UV light emitting device, wherein the filter is transparent to the UV excitation radiation having the first peak wavelength and the filter reflects UV light of the second peak wavelength emitted by the UV light emitting device.

17. A system for at least one of skin tanning and phototherapy, comprising:  
a first means for at least one of skin tanning and phototherapy; and  
a nanostructure UV light emitting device.

18. The system of claim 17, wherein the first means is a means for skin tanning.

19. The system of claim 17, wherein the first means is a means for phototherapy.

20. The system of claim 17, wherein the first means is a means for both skin tanning and phototherapy.

21. The system of claim 17, wherein the nanostructure UV light emitting device comprises at least one of a nanoparticle and a nanowire UVA light emitting device.

22. The system of claim 21, further comprising a second means for providing UV excitation radiation of a first peak wavelength onto the nanostructure UV light emitting device to cause the nanostructure UV light

emitting device to emit UVA light having a second UVA peak wavelength longer than the first peak wavelength.

23. The system of claim 22, wherein the UV light emitting device comprises nanoparticles having an average diameter smaller than 100 nm.
24. The system of claim 22, wherein the UV light emitting device comprises nanowires having an average thickness smaller than 150 nm.
25. A method for at least one of skin tanning and phototherapy, comprising providing UVA light from a nanostructure UV light emitting device onto a skin of a human subject who is located in a chamber adapted for at least one of skin tanning and phototherapy in order to at least one of tan the skin and to provide phototherapy for the skin.
26. The method of claim 25, wherein the UVA light tans the skin.
27. The method of claim 25, wherein the UVA light provides phototherapy for the skin.
28. The method of claim 25, wherein the UVA light provides tanning and phototherapy for the skin.
29. The method of claim 25, wherein the chamber comprises a bed.
30. The method of claim 25, wherein the chamber comprises a booth.
31. The method of claim 25, wherein the nanostructure UV light emitting device comprises at least one of a nanoparticle and a nanowire UVA light emitting device.

32. The method of claim 31, further comprising:  
providing UV excitation radiation of a first peak wavelength from a UV excitation source to the UV light emitting device; and  
emitting the UVA light having a second UVA peak wavelength longer than the first peak wavelength from the UV light emitting device in response to the provided UV excitation radiation.
33. The method of claim 32, wherein the UV light emitting device comprises nanoparticles having an average diameter smaller than 100 nm.
34. The method of claim 32, wherein the UV light emitting device comprises nanowires having an average thickness smaller than 150 nm.
35. The method of claim 32, wherein the UVA light emitted by the UV light emitting device comprises a UVA-1 light.
36. The method of claim 32, wherein the UV light emitting device comprises:  
a first layer of first nanoparticles or nanowires located proximal to the UV excitation source, wherein the first nanoparticles or nanowires emit UV light of a third peak wavelength longer than the first peak wavelength when irradiated with the UV excitation radiation; and  
a second layer of second nanoparticles or nanowires located distal from the UV excitation source, such that the first layer is located between the second layer and the UV excitation source, wherein the second nanoparticles or nanowires emit UV light of the second peak wavelength longer than the third peak wavelength when irradiated with the UV light from the nanoparticles or nanowires of the first layer.
37. The method of claim 32, wherein:

the UV excitation source comprises a gas vessel comprising a gas which emits the UV excitation radiation in response to a stimulus; and

the UV light emitting device comprises at least one layer of nanoparticles coated on an inner surface of at least one UV light transparent wall of the gas vessel.

38. The method of claim 32, wherein the nanoparticles emit only UVA radiation due to their size.

39. The method of claim 32, wherein:

the UV excitation source comprises a UV lamp; and

the UV light emitting device comprises at least one layer of nanoparticles coated on an outer surface of the UV lamp.

40. The method of claim 25, further comprising a filter located between the UV excitation source and the UV light emitting device, wherein the filter is transparent to the UV excitation radiation having the first peak wavelength and the filter reflects UV light of the second peak wavelength emitted by the UV light emitting device.

41. A system for at least one of skin tanning and phototherapy, comprising:  
a chamber adapted for at least one of skin tanning and phototherapy;  
and

a light emitting device which emits light having a peak wavelength between about 400 nm and about 415 nm.

42. The system of claim 41, wherein the light emitting device comprises a lamp, a light emitting diode, nanoparticles or nanowires.

43. The system of claim 42, wherein the light emitting device emits light having substantially no wavelengths outside the about 400 nm to the about 415 nm range.